

SUNNYWAY TECHNOLOGY(CHINA)

ANTENNA SPEC

Customer name: Shenzhen iData Information Technology Co., LTD		Entry name: J15-3		
Working band: BT (2400-2500MHz)				
Motherboard version:				
Sunnyway Material specification				
Specification type	Sunnyway number	Customer number		
BT-D Antenna	SZ24585IB77-1			
Revision history				
Date of preparation/change	Change content	Altered person	Edition	
2025.09.17	New issue	Yao Da Heng	A	
Sunnyway Countersign column				
R&D	ME:	To examine:	QE:	Approval:
	RF:	To examine:		
Customer will sign the column				
Electronic Engineer	Project manager	Structural Engineer	Quality Engineer	

Directory

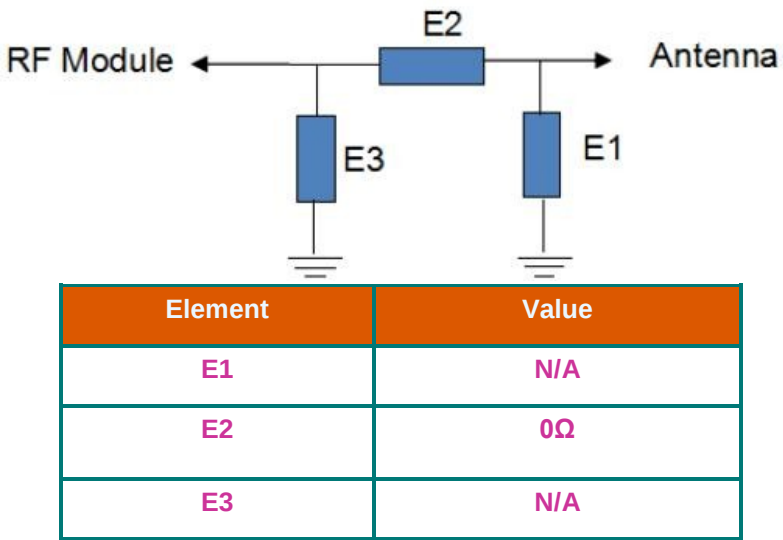
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1. Project information

1.1 Mockup picture



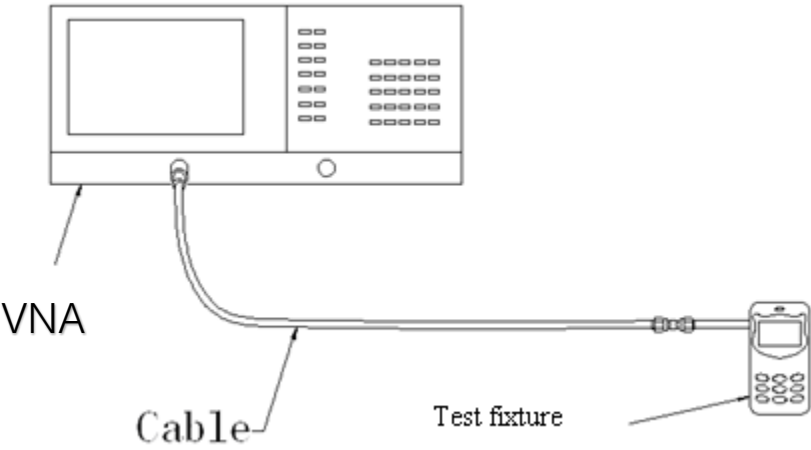
2. Matching circuit



3. Antenna passive testing data

3.1 S11 Description of the test method

Test the equipment: Vector network analyzer (Agilent E5071C)
Test methodology: Use a 50 ohm CABLE cable to export from the instrument test port, use the calibration piece to calibrate and connect the SMA connector of the test fixture, and record the return loss and standing wave ratio corresponding to the relevant frequency point.
Below is a schematic picture of the test:

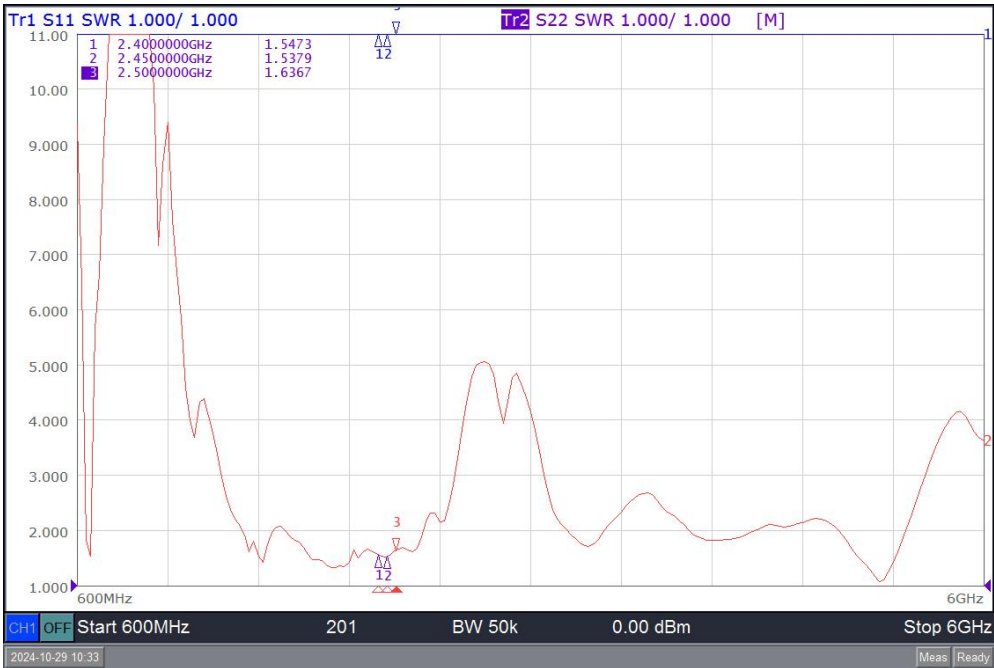


Test schematic diagram

3.2 S11 Test parameters

(Freq.) MHz	2400	2450	2500
VSWR	1.5	1.5	1.6

驻波比 VSWR



4. Antenna active testing data

4.1 Test the environment

Test the system: Multi-probe OTA measurement system (XH-IoT)

Test the environment: Temperature $22^{\circ}\text{C}\pm 3^{\circ}\text{C}$, humidity $50\%\pm 15\%$

Test the equipment: When testing passive data, use the network analyzer R&S ZND/ Agilent E5071C

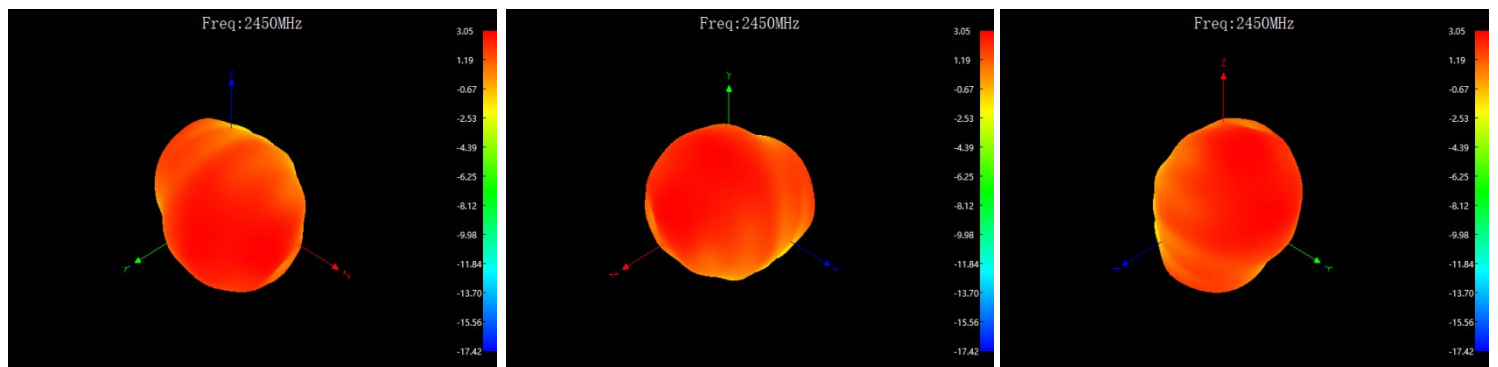
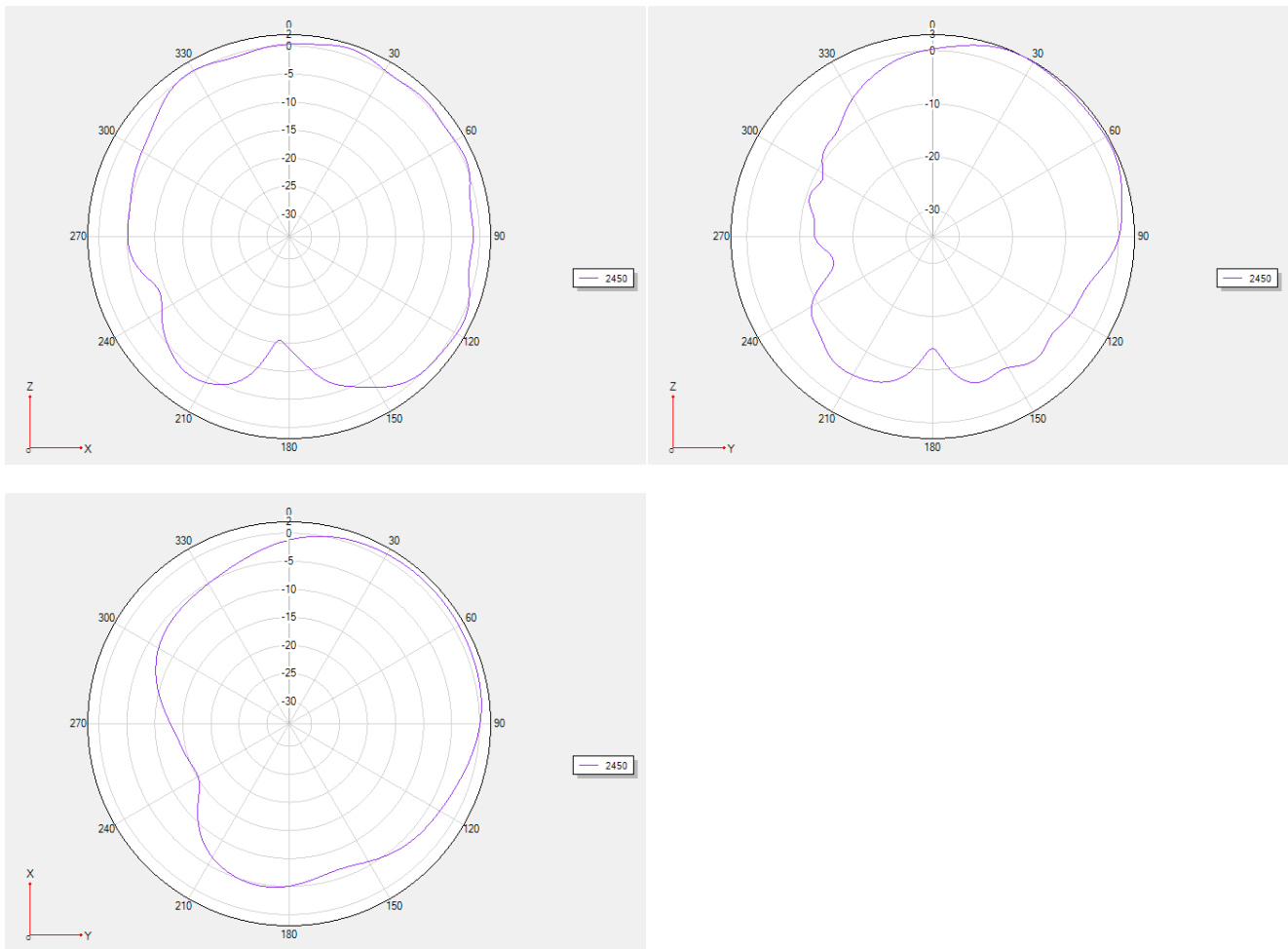
When testing active data, use the Agilent 8960/CMW500/SP9500E/SP8315



4.2 Antenna efficiency and gain

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	3.34	59.32
2410	3.06	60.82
2420	3.41	61.88
2430	3.16	62.05
2440	3.41	63.09
2450	3.05	63.33
2460	3.35	62.7
2470	3.22	63.55
2480	3.25	61.46
2490	3.22	60.58
2500	3.01	59.84

4.4 directional diagram



5. Environmental treatment methods

No design

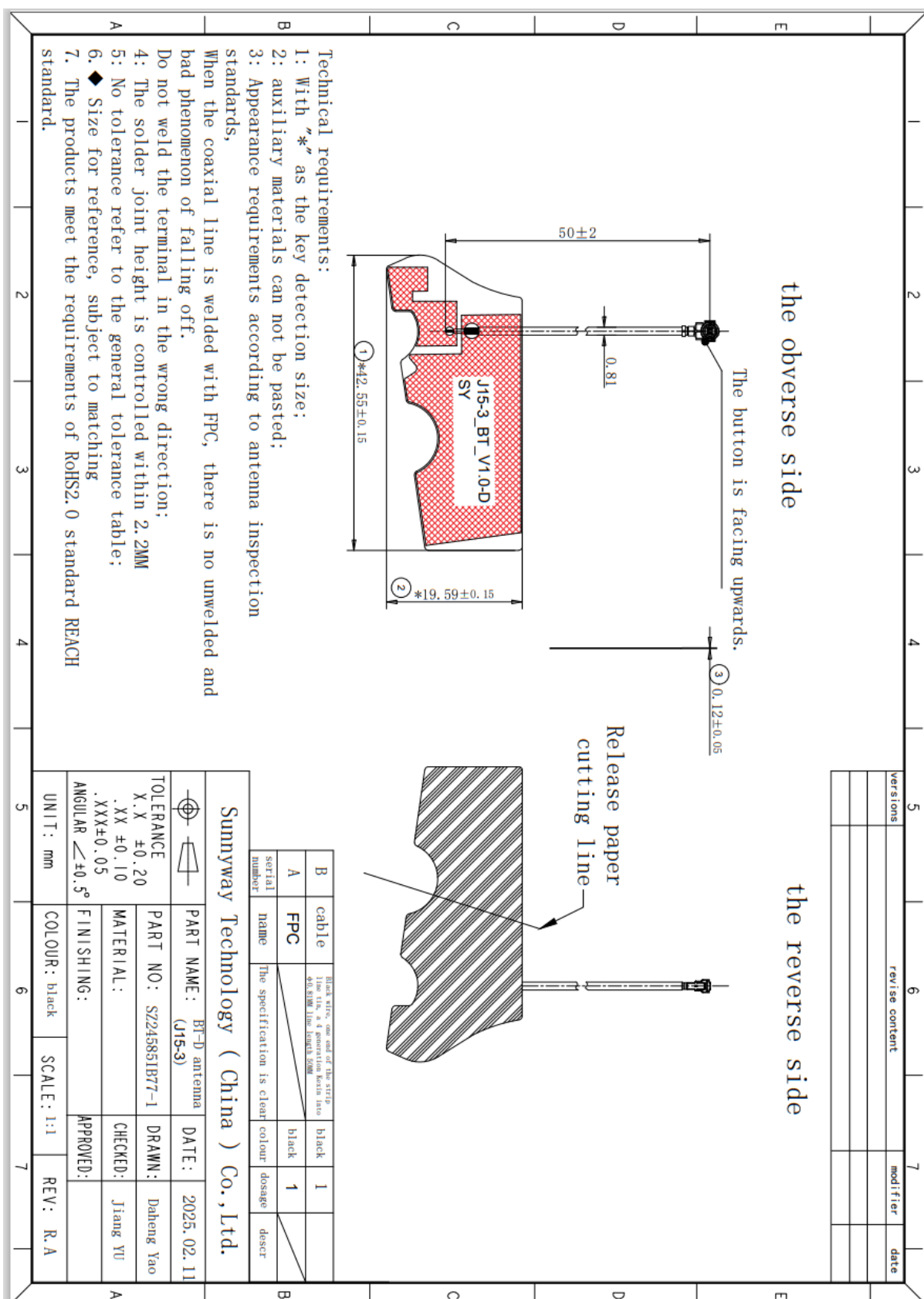
6. Standard for mass production antennas

When the antenna is mass-produced, the VSWR is used as the mass production test standard.

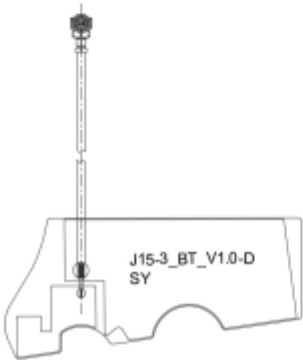
According to the differences in the project itself, the following criteria are given:

Freq. (MHz)	Mass production standards
2400-2500	$VSWR(\text{Production performance}) < VSWR(\text{Confirmed performance}) + 0.5$

7. Engineering drawings



8. Packaging method

Parts packing instructions report			
customer name	Ying Da	manufacturer	SUNNYWAY
entry name	SZ24585IB77-1	product name	BT-D <u>antenna</u>
Bale quantity	<u>100</u> PCS * <u>1</u> ☐ bundle ☐ PE bag ☒ disc ☐ layer ☐ other _____		
Moisture-proof & slow walking	☐ desiccant ☐ Vacuum bag ☐ Bubble pack ☐ foam ☐ Paper wood ☒ other _____		
	 Customer Name: Ying Da Product name: BT-D antenna Order Number: Manufacturer code: SZ24585IB77-1 Customer Code: Quantity: Inspector: Delivery Date: Precautions: Moisture-proof, shock-proof, pressure-proof, handle with care.		
	100pcs / disc Carton label		
	Customer Name: Ying Da Product name: BT-D antenna Order Number: Manufacturer code: SZ24585IB77-1 Customer Code: Quantity: Inspector: Delivery Date: Precautions: Moisture-proof, shock-proof, pressure-proof, handle with care.  Check packaging, paste product		
		manufacturer	
		Daheng Yao	
* The packaging picture is a schematic, does not mean that the picture is the actual product.			